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(FILE 'HOME' ENTERED AT 14:13:23 ON 26 JAN 2004)

FILE 'REGISTRY' ENTERED AT 14:13:33 ON 26 JAN 2004

L1 STRUCTURE UPLOADED

L2 5 S L1

L3 85 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 14:14:35 ON 26 JAN 2004

L4 6 S L3

FILE 'BEILSTEIN' ENTERED AT 14:15:47 ON 26 JAN 2004

L5 0 S L1

L6 0 S L1 SSS FULL

FILE 'MARPAT' ENTERED AT 14:16:20 ON 26 JAN 2004

L7 0 S L3

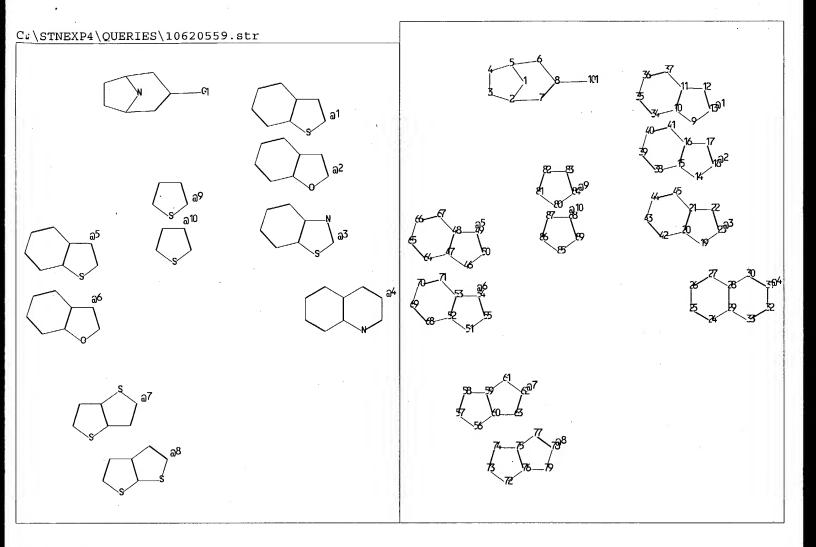
L8 14 S L3 SSS FULL

FILE 'CAPLUS' ENTERED AT 14:16:57 ON 26 JAN 2004

L9 14 S L8

=> s 19 not 14

L10 8 L9 NOT L4



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chain nodes :
    101
ring nodes :
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chain bonds :
    8-101
ring bonds :
    1-2 1-5 2-3 2-7
                         3-4 4-5 5-6
                                         6-8 7-8 9-10 9-13 10-11 10-34
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    14-15 14-18
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exact/norm bonds :
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normalized bonds :
    10-11 10-34
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                                                                       64-65
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    69-70
          70-71
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Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 33:Atom 34:Atom 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 20:Atom 21:Atom 30:Atom 31:Atom 40:Atom 41:Atom 44:Atom 45:Atom 46:Atom 47:Atom 48:Atom 49:Atom 50:Atom 51:Atom 42:Atom 43:Atom 52:Atom 53:Atom 54:Atom 55:Atom 56:Atom 57:Atom 58:Atom 59:Atom 60:Atom 61:Atom 66:Atom 67:Atom 76:Atom 62:Atom 63:Atom 64:Atom 65:Atom 68:Atom 69:Atom 70:Atom 71:Atom 80:Atom 81:Atom 72:Atom 73:Atom 74:Atom 75:Atom 78:Atom 79:Atom 82:Atom 83:Atom 84:Atom 85:Atom 86:Atom 87:Atom 88:Atom 89:Atom 101:CLASS

### => d 1-6 bib abs hitstr

ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN L4

2003:42270 CAPLUS AN

DN 138:89958

Preparation of benzothiophene and benzothiazole compounds as cholinergic and monoamine receptor modulators

Peters, Dan; Olsen, Gunnar M.; Nielsen, Elsebet Ostergaard; Ahring, Philip IN K.; Jorgensen, Tino Dyhring

PA Neurosearch A/S, Den.

PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DT Patent

ĿΑ English

FAN.	CNT	1																
	PAT	CENT :	NO.		KI	ND	DATE			- A	PPLI	CATI	N NC	ο.	DATE			
			<b>-</b>							_								
PI .				93	Al		20030116			WO 2002-DK460					20020702			
				93	C1 2		20030410											
		W:	ΑE,	AG,	ΑL,	AM,	ΑT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	ΒZ,	CA,	CH,	CN,
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			PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	TJ,	TM,	TN,	TR,	TT,	TZ,
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			ΝE,	SN,	TD,	TG												

PRAI DK 2001-1064 20010706

MARPAT 138:89958 OS

GI

Novel compds. of formula I [A, B, D, E, G = C, N; X = heterocycle] are AB prepd. that are found to be cholinergic ligands at the nicotinic acetylcholine receptors and modulators of the monoamine receptors and transporters. Due to their pharmacol. profile the compds. of the invention may be useful for the treatment of diseases or disorders as diverse as those related to the cholinergic system of the central nervous system (CNS), the peripheral nervous system (PNS), diseases or disorders related to smooth muscle contraction, endocrine diseases or disorders, diseases or disorders related to neuro-degeneration, diseases or disorders related to inflammation, pain, and withdrawal symptoms caused by the termination of abuse of chem. substances. Thus, was prepd. and inhibited 3H-.alpha.-bungarotoxine binding in rat brain with IC50 of 0.018 .mu.M. ΙT

484650-60-4P RL: DGN (Diagnostic use); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (prepn. of benzothiophene and benzothiazole compds. as cholinergic and

monoamine receptor modulators)

RN 484650-60-4 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxidobenzo[b]thien-2-y1)- (9CI) (CA INDEX NAME)

484651-19-6P 484651-20-9P 484651-21-0P

484651-22-1P

RL: DGN (Diagnostic use); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of benzothiophene and benzothiazole compds. as cholinergic and monoamine receptor modulators)

RN 484650-61-5 CAPLUS CN 8-Azabicyclo[3.2.1]

8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxidobenzo[b]thien-2-yl)-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 484650-60-4 CMF C15 H15 N O2 S

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 484650-62-6 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxidobenzo[b]thien-2-yl)-8-methyl-(9CI) (CA INDEX NAME)

RN 484650-63-7 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxidobenzo[b]thien-2-yl)-8-methyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 484650-62-6 CMF C16 H17 N O2 S

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 484650-64-8 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxidobenzo[b]thien-2-yl)-8-(2-propenyl)- (9CI) (CA INDEX NAME)

RN 484650-65-9 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxidobenzo[b]thien-2-yl)-8-ethyl-(9CI) (CA INDEX NAME)

RN 484651-14-1 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxidobenzo[b]thien-2-yl)-8-(phenylmethyl)- (9CI) (CA INDEX NAME)

CH2-Ph

RN 484651-19-6 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxido-2-benzothiazoly1)- (9CI) (CA INDEX NAME)

RN 484651-20-9 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxido-2-benzothiazolyl)-8-methyl-(9CI) (CA INDEX NAME)

RN 484651-21-0 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxido-2-benzothiazolyl)-8-ethyl-(9CI) (CA INDEX NAME)

RN 484651-22-1 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(1,1-dioxido-2-benzothiazoly1)-8-(phenylmethy1)- (9CI) (CA INDEX NAME)

IT 216853-40-6P 484650-70-6P 484650-71-7P

484650-72-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of benzothiophene and benzothiazole compds. as cholinergic and monoamine receptor modulators)

RN 216853-40-6 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-benzo[b]thien-2-yl-8-methyl-, hydrochloride (9CI) (CA INDEX NAME)

## • HCl

RN 484650-70-6 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-benzo[b]thien-2-yl-, hydrochloride (9CI) (CA INDEX NAME)

## • HCl

RN 484650-71-7 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-carboxylic acid, 3-benzo[b]thien-2-yl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 484650-72-8 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-carboxylic acid, 3-(1,1-dioxidobenzo[b]thien-2-yl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

# RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
1.4
     2002:293427 CAPLUS
AN
     136:325574
     Preparation of piperazine, homopiperazine, and 8-azabicyclo[3.2.1]oct-2-
ΤI
     ene, and 3,9-diazabicyclo[4.2.1] nonane derivatives for treatment of
     affective disorders by the combined action of a nicotinic receptor agonist
     and a monoaminergic substance
     Olsen, Gunnar M.; Peters, Dan; Nielsen, Elsebet Ostergaard
IN
     Neurosearch A/S, Den.
PΑ
     PCT Int. Appl., 31 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                       KIND DATE
                                             APPLICATION NO.
                                                               DATE
     PATENT NO.
                              20020418
                                             WO 2001-DK661
                                                               20011010
     WO 2002030405
                        A2
PΙ
                             20020906
     WO 2002030405
                        A3
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             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
              LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
              PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
              US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
              BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                                             AU 2001-95436
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                              20020422
     AU 2001095436
                        A5
                                             EP 2001-976043
                                                                20011010
                              20031105
     EP 1358177
                        A2
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                              20001013
PRAI DK 2000-1535
                        Α
     US 2000-242146P
                        Ρ
                              20001023
                              20011010
     WO 2001-DK661
                        W
     MARPAT 136:325574
os
GΙ
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$$(H_2C)_{\mathfrak{m}}^{R1} (CH_2)_{\mathfrak{n}}$$

This invention relates to use of the combined action of a nicotinic acetylcholine receptor agonist and a monoamine reuptake inhibitor for the treatment of affective disorders including depression, anxiety, obsessive compulsive disorder (OCD), panic disorder, or pain, as well as to pharmaceutical compns. comprising these substances and chem. substances for use according to the invention. The chem. substances are represented by piperazine and homopiperazine derivs. (I; n = 1,2,3; m = 0,1,2; R = H, alkyl, cycloalkyl, cycloalkylalkyl, alkoxy, acyl, benzyl; R1 = 5-bromo-3-pyridyl, 6-chloro-3-pyridyl, 6-bromo-5-methoxy-3-pyridyl, 6-bromo-3-pyridyl, 6-bromo-5-chloro-3-pyridyl, 5,6-dibromo-3-pyridyl, etc.) and 8-azabicyclo[3.2.1]oct-2-ene derivs. (II; R = H, alkyl, alkenyl, cycloalkyn, cyanoalkyl, Ph, naphthyl, benzyl; R1 = CHO, alkanoyl, cycloalkanoyl, carbamoyl, furanyl, thienyl, pyrrolyl, oxazolyl, isoxazolyl, imidazolyl, pyridyl, pyrimidinyl, thiazolyl, naphthyl, indolyl, benzofuranyl, etc.). Thus, 1-(6-Chloro-3-pyridyl)piperazine

(III) (0.3, 1, 3, 10 mg/kg s.c.) was tested in the mouse forced swim test which is considered predictive of a potential antidepressant pharmacol effect and it did not affect forced swimming with a 30 min pretreatment. However, the combination of venlafaxine and III (1+3; 3+3; 10+1; 10+3 mg/kg s.c.) significantly increased the forced swimming in NMRI mice.

412347-70-7P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (intermediate; prepn. of piperazine, homopiperazine, azabicyclo[3,2] lloctene and diazabicyclo[4,2,1]nonane derivs. f

azabicyclo[3.2.1]octene, and diazabicyclo[4.2.1]nonane derivs. for treatment of affective disorders)

treatment of affective disorders)
RN 412347-70-7 CAPLUS

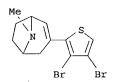
RN 412347-70-7 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-benzo[b]thien-2-yl- (9CI) (CA INDEX NAME)

IT 273403-42-2P 412347-74-1P 412347-75-2P 412347-78-5P 412347-80-9P 412347-82-1P 412347-83-2P 412347-86-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of piperazine, homopiperazine, azabicyclo[3.2.1]octene, and diazabicyclo[4.2.1]nonane derivs. for treatment of affective disorders) 273403-42-2 CAPLUS

RN 273403-42-2 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3,4-dibromo-2-thienyl)-8-methyl- (9CI) (CA INDEX NAME)



RN 412347-74-1 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-benzo[b]thien-2-yl-8-ethyl- (9CI) (CA INDEX NAME)

RN 412347-75-2 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-benzo[b]thien-2-yl-8-ethyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 412347-74-1 CMF C17 H19 N S

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 412347-78-5 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-benzo[b]thien-2-yl-8-(2-propenyl)- (9CI) (CA INDEX NAME)

RN 412347-80-9 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-thienyl)-8-(2-propenyl)- (9CI) (CA INDEX NAME)

RN 412347-82-1 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-acetonitrile, 3-benzo[b]thien-2-yl- (9CI) (CA INDEX NAME)

RN 412347-83-2 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-acetonitrile, 3-benzo[b]thien-2-yl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 412347-82-1 CMF C17 H16 N2 S

CM :

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

$$_{\mathrm{HO_{2}C}}$$
  $^{\mathrm{E}}$   $_{\mathrm{CO_{2}H}}$ 

RN 412347-86-5 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3,4-dibromo-2-thienyl)-8-methyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM

CRN 273403-42-2

CMF C12 H13 Br2 N S

CM

CRN 110-17-8  ${\tt CMF}$ C4 H4 O4

Double bond geometry as shown.

IT 216853-33-7

RL: RCT (Reactant); RACT (Reactant or reagent) (reactant; prepn. of piperazine, homopiperazine, azabicyclo[3.2.1]octene, and diazabicyclo[4.2.1]nonane derivs. for treatment of affective disorders)

216853-33-7 CAPLUS RN

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-benzo[b]thien-2-yl-8-methyl- (9CI)

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L4
    ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
```

2001:472712 CAPLUS AN

DN 135:76800

ΤI Azabicyclo[3.2.1]octane derivatives with activity as serotonin reuptake

inhibitors and 5-HT1A antagonists, and their use as antidepressants. He, John Xiaoqiang; Honigschmidt, Nicholas Allan; Kohn, Todd Jonathan; Rocco, Vincent Patrick; Spinazze, Patrick Gianpietro; Takeuchi, Kumiko IN

PA Eli Lilly and Co., USA

so PCT Int. Appl., 97 pp.

CODEN: PIXXD2

DT Patent

LA English

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FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                                APPLICATION NO. DATE
PΙ
     WO 2001046187
                         A1
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              LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
              SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
              YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
              DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
119 A1 20020925 EP 2000-982253 20001206
                                               EP ·2000-982253
     EP 1242419
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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PRAI US 1999-172610P
                         P
                               19991220
     WO 2000-US32431
                         W
                               20001206
os
     MARPAT 135:76800
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GI

AB The invention provides compds. of formula I [A = H, OH, alkoxy; B = (un)substituted benzothienyl, benzofuranyl, indolyl, benzothiazolyl, benzimidazolyl, benzoxazolyl, quinolinyl, phthalazinyl, naphthalenyl, or benzo[h]quinolinyl; X = H, OH, alkoxy, or is absent; Y = CH2, NH, or S; R1 = H, F, alkyl, CONH2 or (di)alkyl derivs., cyano; R2 = H, F, Cl, Br, iodo, OH, alkyl, or alkoxy; p = 0-4; q = 0-3] and their pharmaceutically acceptable salts. The compds. are potent serotonin reuptake inhibitors and antagonists of 5-HT1A receptors (no data). As such, they are expected to be useful for treating depression, anxiety, and alleviating the symptoms caused by withdrawal or partial withdrawal from the use of tobacco or of nicotine. Fourteen synthetic examples and several precursor prepns. are given. For instance, title compd. II was prepd. in 87% yield by reaction of endo-3-(4-methoxybenzo[b]thiophen-2-yl)-8-azabicyclo[3.2.1]octane (prepn. given) with (S)-4-(oxiranylmethoxy)indole in refluxing MeOH.

II

IT 346465-39-2P 346465-40-5P 346465-42-7P 346465-43-8P 346465-46-1P 346465-47-2P 346465-48-3P 346465-49-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; prepn. of azabicyclooctane derivs. as serotonin reuptake inhibitors and 5-HT1A antagonists for use as antidepressants)

RN 346465-39-2 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, .alpha.-[(1H-indol-4-yloxy)methyl]-3-(4-methoxybenzo[b]thien-2-yl)-, (.alpha.S,1S,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 346465-40-5 CAPLUS

8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, .alpha.-[(1H-indol-4-yloxy)methyl]-3-(4-methoxybenzo[b]thien-2-yl)-, (.alpha.S,1S,5R)-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 346465-39-2 CMF C27 H28 N2 O3 S

Absolute stereochemistry.

CM 2

CRN 144-62-7 CMF C2 H2 O4

RN 346465-42-7 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, .alpha.-[(1H-indol-4-yloxy)methyl]-3-(4-methoxybenzo[b]thien-2-yl)-, (.alpha.S,1R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 346465-43-8 CAPLUS

N 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, .alpha.-[(1H-indol-4-yloxy)methyl]-3-(4-methoxybenzo[b]thien-2-yl)-, (.alpha.S,1R,5S)-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 346465-42-7 CMF C27 H28 N2 O3 S

Absolute stereochemistry.

CM 2

CRN 144-62-7 CMF C2 H2 O4

RN 346465-46-1 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, 3-(4-methoxybenzo[b]thien-2-yl)-.alpha.-[[(2-methyl-1H-indol-4-yl)oxy]methyl]-, (.alpha.S,1S,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 346465-47-2 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, 3-(4-methoxybenzo[b]thien-2-yl)-.alpha.-[[(2-methyl-1H-indol-4-yl)oxy]methyl]-, (.alpha.S,1S,5R)-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 346465-46-1 CMF C28 H30 N2 O3 S

Absolute stereochemistry.

CM 2

CRN 144-62-7 CMF C2 H2 O4

RN 346465-48-3 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, 3-(4-methoxybenzo[b]thien-2-yl).alpha.-[[(2-methyl-1H-indol-4-yl)oxy]methyl]-, (.alpha.S,1R,5S)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

RN 346465-49-4 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, 3-(4-methoxybenzo[b]thien-2-yl)-.alpha.-[[(2-methyl-1H-indol-4-yl)oxy]methyl]-, (.alpha.S,1R,5S)-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 346465-48-3 CMF C28 H30 N2 O3 S

Absolute stereochemistry.

CM 2

CRN 144-62-7 CMF C2 H2 O4

CN

IT 345995-28-0P 345995-30-4P 345995-31-5P 346465-83-6P 346465-85-8P 346465-87-0P

346465-90-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of azabicyclooctane derivs. as serotonin reuptake inhibitors and 5-HTIA antagonists for use as antidepressants)

RN 345995-28-0 CAPLUS

8-Azabicyclo[3.2.1]oct-2-ene-8-carboxylic acid, 3-(4-methoxybenzo[b]thien-2-yl)-, ethyl ester (9CI) (CA INDEX NAME)

RN 345995-30-4 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(4-methoxybenzo[b]thien-2-y1)- (9CI) (CA INDEX NAME)

OMe

RN 345995-31-5 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(4-methoxybenzo[b]thien-2-yl)-, ethanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 345995-30-4 CMF C16 H17 N O S

CM 2

CRN 144-62-7 CMF C2 H2 O4

RN 346465-83-6 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-carboxylic acid, 3-(4-chloro-2-benzothiazolyl)-, ethyl ester (9CI) (CA INDEX NAME)

RN 346465-85-8 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(4-chloro-2-benzothiazoly1)- (9CI) (CA INDEX NAME)

RN 346465-87-0 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-carboxylic acid, 3-(5-fluoro-2-benzothiazolyl)-, ethyl ester (9CI) (CA INDEX NAME)

RN 346465-90-5 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-carboxylic acid, 3-(4,5-dimethyl-2-

benzothiazolyl) -, ethyl ester (9CI) (CA INDEX NAME)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L4
     ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ΑN
     2001:472711 CAPLUS
DN
     135:76778
     Benzofuran derivatives with activity as serotonin reuptake inhibitors and
TI
     5-HT1A antagonists, and their use as antidepressants.
IN
     He, John Xiaoqiang; Honigschmidt, Nicholas Allan; Kohn, Todd Jonathan;
     Rocco, Vincent Patrick; Spinazze, Patrick Gianpietro; Takeuchi, Kumiko
PΑ
     Eli Lilly and Company, USA
     PCT Int. Appl., 80 pp.
SO
     CODEN: PIXXD2
DT
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     English
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     PATENT NO.
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                                            APPLICATION NO.
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             HU, ID, IL, IN,
                             IS, JP, KE,
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             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
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                                         TM,
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PRAI US 1999-172742P
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     WO 2000-US32425
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                            20001206
    MARPAT 135:76778
os
GT
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R^{1} & & & & \\
R^{1} & & & & \\
\end{array}$$

$$\begin{array}{c|c}
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II & & & \\
\end{array}$$

$$\begin{array}{c|c}
R & & & \\
\hline
II & & & \\
\end{array}$$

$$\begin{array}{c|c}
R & & & \\
\hline
II & & & \\
\end{array}$$

$$\begin{array}{c|c}
R & & & \\
\hline
II & & & \\
\end{array}$$

$$\begin{array}{c|c}
R & & & \\
\hline
II & & & \\
\end{array}$$

$$\begin{array}{c|c}
R & & & \\
\end{array}$$

(un) substituted benzothienyl, benzofuranyl, indolyl, benzothiazolyl, benzimidazolyl, benzoxazolyl, quinolinyl, phthalazinyl, naphthalenyl, or benzo[h]quinolinyl; X = H, OH, alkoxy, or is absent; R, Rl = H, F, alkyl, CONH2 or (di)alkyl derivs., cyano, or Rl is absent; R2 = H, F, Cl, Br, iodo, OH, alkyl, or alkoxy; p = 0-4; q = 0-3] and their pharmaceutically acceptable salts. The compds. are potent serotonin reuptake inhibitors and antagonists of 5-HTlA receptors (no data). As such, they are expected to be useful for treating depression, anxiety, and alleviating the symptoms caused by withdrawal or partial withdrawal from the use of tobacco or of nicotine. Three synthetic examples and several precursor prepns. are given. For instance, title compd. II (as the oxalate) was prepd. in 84% yield by reaction of endo-3-(4-methoxybenzo[b]thiophen-2-yl)-8-azabicyclo[3.2.1]octane (prepn. given) with (2S)-4- (glycidyloxy)benzofuran in refluxing MeOH.

T 345995-17-7P 345995-18-8P 345995-19-9P 345995-20-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; prepn. of benzofuran derivs. as serotonin reuptake inhibitors and 5-HT1A antagonists for use as antidepressants)

RN 345995-17-7 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, .alpha.-[(4-benzofuranyloxy)methyl]-3-(4-methoxybenzo[b]thien-2-yl)-, (.alpha.S,1S,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 345995-18-8 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, .alpha.-[(4-benzofuranyloxy)methyl]-3-(4-methoxybenzo[b]thien-2-yl)-, (.alpha.S,1S,5R)-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 345995-17-7 CMF C27 H27 N O4 S

Absolute stereochemistry.

CM 2

CRN 144-62-7 CMF C2 H2 O4

RN 345995-19-9 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, .alpha.-[(4benzofuranyloxy)methyl]-3-(4-methoxybenzo[b]thien-2-yl)-, (.alpha.S,1R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 345995-20-2 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-ethanol, .alpha.-[(4-benzofuranyloxy)methyl]-3-(4-methoxybenzo[b]thien-2-yl)-, (.alpha.S,1R,5S)-, ethanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 345995-19-9 CMF C27 H27 N O4 S

Absolute stereochemistry.

CM 2

CRN 144-62-7 CMF C2 H2 O4

IT 345995-28-0P 345995-30-4P 345995-31-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of benzofuran derivs. as serotonin reuptake inhibitors and 5-HT1A antagonists for use as antidepressants)

RN 345995-28-0 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene-8-carboxylic acid, 3-(4-methoxybenzo[b]thien-2-yl)-, ethyl ester (9CI) (CA INDEX NAME)

RN 345995-30-4 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(4-methoxybenzo[b]thien-2-y1)- (9CI) (CA INDEX NAME)

345995-31-5 CAPLUS

8-Azabicyclo[3.2.1]oct-2-ene, 3-(4-methoxybenzo[b]thien-2-yl)-, ethanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 345995-30-4 CMF C16 H17 N O S

CM 2

CRN 144-62-7 CMF C2 H2 O4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 4 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
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AN 2000:384193 CAPLUS

DN 133:30663

ΤI Preparation of 8-azabicyclo[3.2.1]oct-2-ene and -octane derivatives as cholinergic ligands at the nicotinic Acetyl Choline Receptors (nAChR)

Peters, Dan; Olsen, Gunnar M.; Nielsen, Simon Feldbaek; Nielsen, Elsebet IN Ostergaard

Neurosearch A/S, Den. PΑ so

PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DT Patent

LA Enalish

FAN. CNT 1												
LAM.	PATENT N	10	KIND	DATE		ADDITONTON NO DAME						
			KIND 	DATE		APPLICATION NO. DATE						
ΡI	WO 20000	32600	A1 20000608			WO 1999-DK661 19991126						
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				20020524								
	NZ 51028											
						NZ 1999-510287 19991126 EP 2003-22707 19991126						
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	π.	IE, FI,	CII, DE,	DK, ES,	rĸ,	, GB, GR, IT, LI, LU, NL, SE, MC, PT,						
						US 2001-864367 20010525						
	US 66803			20020321		05 2001-664367 20010525						
•	35 30003	20	112	20040120								

NR R1

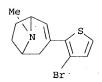
AB The title compds. [I; R = H, alkyl, alkenyl, etc.; R1 = COR2, (un) substituted mono- or polycyclic aryl, (un) substituted (un) satd. 5-6 membered heterocyclyl, etc.; R2 = H, alkyl, alkenyl, etc.] and their salts which are found to be cholinergic ligands at the nicotinic Acetyl Choline Receptors (no data) and may be useful for the treatment of diseases or disorders as diverse as those related to the cholinergic system of the central nervous system (CNS), diseases or disorders related to smooth muscle contraction, endocrine diseases or disorders, diseases or disorders related to neurodegeneration, diseases or disorders related to inflammation, pain, and withdrawal symptoms caused by the termination of abuse of chem. substances, were prepd. E.g., a 2-step synthesis of (.+-.)-8-azabicyclo[3.2.1]oct-2-ene I.fumarate [R = Me; R1 = 6-methoxy-2-naphthyl] was given. Compds. I may also be useful as radioligands for in vivo receptor imaging (neuroimaging).

T 216853-59-7P 273402-98-5P 273403-04-6P 273403-05-7P 273403-08-0P 273403-09-1P 273403-41-1P 273403-42-2P 273403-43-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of 8-azabicyclo[3.2.1]oct-2-ene and -octane derivs. as cholinergic ligands at the nicotinic Acetyl Choline Receptors (nAChR)) 216853-59-7 CAPLUS

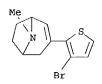
RN 216853-59-7 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-thienyl)-8-methyl- (9CI) (CA INDEX NAME)



RN 273402-98-5 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-thienyl)-8-methyl-, (2E)-2-butenedioate (9CI) (CA INDEX NAME)

CM 1

CRN 216853-59-7 CMF C12 H14 Br N S



CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 273403-04-6 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-thienyl)- (9CI) (CA INDEX NAME)

RN 273403-05-7 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-thienyl)-, (2E)-2-butenedioate (9CI) (CA INDEX NAME)

CM

CRN 273403-04-6 CMF C11 H12 Br N S

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 273403-08-0 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-thienyl)-8-ethyl- (9CI) (CA INDEX NAME)

RN 273403-09-1 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-thienyl)-8-ethyl-, (2E)-2-butenedioate (9CI) (CA INDEX NAME)

CM

CRN 273403-08-0 CMF C13 H16 Br N S

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 273403-41-1 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-iodo-2-thienyl)-8-methyl- (9CI) (CA INDEX NAME)

RN 273403-42-2 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3,4-dibromo-2-thienyl)-8-methyl- (9CI) (CA INDEX NAME)

RN 273403-43-3 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3,4-dichloro-2-thieny1)-8-methyl- (9CI) (CA INDEX NAME)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:795013 CAPLUS

DN 130:52335

TI 8-Azabicyclo[3.2.1]oct-2-ene and -octane derivatives as cholinergic ligands at nicotinic ACh receptors

IN Peters, Dan; Olsen, Gunnar M.; Nielsen, Simon Feldbaek; Nielsen, Elsebet Ostergaard

PA Neurosearch A/s, Den.

SO PCT Int. Appl., 43 pp. CODEN: PIXXD2

DT Patent

LA English

This appy "

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FAN CNT 1
     PATENT NO.
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                             DATE
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                                                              DATE
PΙ
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                                                              19980529
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             NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
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     RU 2186780
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                                                              19980529
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                          20031111 US 1999-45005
MX 1999-11081
                                            US 1999-450637
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                                                              19991129
     MX 9911081
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PRAI DK 1997-627
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                       Α
     DK 1997-1502
                             19971219
     DK 1998-408
                       Α
                             19980324
     DK 1998-534
                             19980416
     WO 1998-DK225
                             19980529
os
     MARPAT 130:52335
GI
```

AB Title compds. I (R = H, alkyl, alkenyl, aryl, aralkyl, etc.; R1 = acyl, aryl, heteroaryl, etc.) or their satd. analogs were prepd. by several methods. Thus, endo-8-benzyl-3-hydroxy-3-(3-pyridyl)-8azabicyclo[3.2.1]octane (II) was prepd. in 34% yield from 8-benzyl-8-azabicyclo[3.2.1]octan-3-one and 3-bromopyridine, and II was then converted to I (R = benzyl, R1 = 3-pyridyl) in 78% yield. The latter was converted to the fumarate salt. The affinity of the products for nicotinic ACh receptors was examd. in tests of 3H-cytisine, 3H-epibatidin, and 3H-.alpha.-bungarotoxin binding.

216853-31-5P 216853-54-2P 216853-60-0P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (8-azabicyclo[3.2.1]oct-2-ene and -octane derivs. as cholinergic

ligands at nicotinic ACh receptors)

RN 216853-31-5 CAPLUS

8-Azabicyclo[3.2.1]oct-2-ene, 3-(2-benzofuranyl)-8-methyl- (9CI) (CA INDEX NAME)

CN

216853-54-2 CAPLUS 8-Azabicyclo[3.2.1]oct-2-ene, 3-(2-benzofuranyl)-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM

CRN 216853-53-1 CMF C15 H15 N O

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 216853-60-0 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-thienyl)-8-methyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM I

CRN 216853-59-7 CMF C12 H14 Br N S

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

IT 216853-09-7P 216853-11-1P 216853-32-6P

216853-33-7P 216853-40-6P 216853-58-6P

216853-59-7P 216853-62-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(8-azabicyclo[3.2.1]oct-2-ene and -octane derivs. as cholinergic ligands at nicotinic ACh receptors)

RN 216853-09-7 CAPLUS

8-Azabicyclo[3.2.1]oct-2-ene, 8-methyl-3-(3-quinolinyl)-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CN

CRN 216853-08-6 CMF C17 H18 N2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 216853-11-1 CAPLUS

N 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-benzofuranyl)-8-methyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM :

CRN 216853-10-0 CMF C16 H17 N O

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 216853-32-6 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(2-benzofuranyl)-8-methyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 216853-31-5 CMF C16 H17 N O

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 216853-33-7 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-benzo[b]thien-2-yl-8-methyl- (9CI) (CA INDEX NAME)

CN

RN 216853-40-6 CAPLUS

8-Azabicyclo[3.2.1]oct-2-ene, 3-benzo[b]thien-2-yl-8-methyl-, hydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 216853-58-6 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(2-benzofuranyl)-8-ethyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM I

CRN 216853-57-5

CMF C17 H19 N O

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 216853-59-7 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-thienyl)-8-methyl- (9CI) (CA INDEX NAME)

RN 216853-62-2 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromo-2-benzofuranyl)-8-methyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 216853-61-1 CMF C16 H16 Br N O

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

CM 1

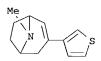
CRN 216853-12-2 CMF C16 H17 N S

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 216853-17-7 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 8-methyl-3-(3-thienyl)-, hydrochloride (9CI) (CA INDEX NAME)



• HCl

RN 216853-42-8 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 8-methyl-3-(2-thienyl)-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 216853-41-7 CMF C12 H15 N S

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN' 216853-43-9 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-[3-(methoxymethy1)-2-thieny1]-8-methy1-(9CI) (CA INDEX NAME)

RN 216853-45-1 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(2-benzothiazolyl)-8-methyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM -

CRN 216853-44-0 CMF C15 H16 N2 S

CM :

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 216853-49-5 CAPLUS

CN 8-Azabicyclo[3.2.1]oct-2-ene, 8-methyl-3-thieno[3,2-b]thien-2-yl-, ethanedioate (1:1) (9CI) (CA INDEX NAME)

CM :

CRN 216853-48-4 CMF C14 H15 N S2

CM 2

CRN 144-62-7 CMF C2 H2 O4

RN 216853-51-9 CAPLUS
CN 8-Azabicyclo[3.2.1]oct-2-ene, 8-methyl-3-thieno[2,3-b]thien-2-yl-, ethanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 216853-50-8 CMF C14 H15 N S2

CM 2

CRN 144-62-7 CMF C2 H2 O4

RN 216853-56-4 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-[3-(3-furany1)-2-thieny1]-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM :

CRN 216853-55-3 CMF C15 H15 N O S

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 216853-64-4 CAPLUS
CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-(3-bromobenzo[b]thien-2-yl)-8-methyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM :

CRN 216853-63-3 CMF C16 H16 Br N S

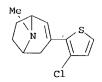
CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

CM :

CRN 216853-65-5 CMF C12 H14 Cl N S



CM 2

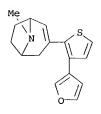
CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RN 216853-68-8 CAPLUS CN 8-Azabicyclo[3.2.1]oct-2-ene, 3-[3-(3-furanyl)-2-thienyl]-8-methyl-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 216853-67-7 CMF C16 H17 N O S



CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> d 1-8 bib abs hitstr
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ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
      2003:696895 CAPLUS
AN
     139:214459
DN
TI
      Preparation of 5-azolylmethyl oxazolidinones and their use as
      antibacterial agents
      Grayestock, Michael Barry; Hales, Neil James; Reck, Folkert; Zhou, Fei;
      Fleming, Paul Robert; Carcanague, Daniel Robert
     Astrazeneca AB, Swed.; Astrazeneca UK Limited
PA
so
      PCT Int. Appl., 126 pp.
      CODEN: PIXXD2
DT
      Patent
     English
LA
FAN. CNT 1
     PATENT NO.
                         KIND
                                DATE
                                                 APPLICATION NO.
ΡI
     WO 2003072576
                          A2
                                20030904
                                                 WO 2003-GB791
                                                                    20030225
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
               CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
               GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
              LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
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               RU, TJ, TM
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              ML, MR, NE, SN, TD, TG
PRAI US 2002-360688P
                          P
                                20020228
     MARPAT 139:214459
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3-Cyclyl-5-[(nitrogen-contg. 5-membered ring)methyl]oxazolidinones (shown as I; e.g. (5R)-3-[4-(1-0xo-3,6-dihydro-2H-thiopyran-4-yl)-3-fluorophenyl]-5-[(4-azidomethyl-1,2,3-triazol-1-yl)methyl]oxazolidin-2-one (shown as II); -N-HET is, for example, 3-R1-1,2,4-triazol-1-yl or 5-R1-2H-tetrazol-2-yl wherein R1 is, for example, halo or (1-4C)alkyl that is substituted by 1 substituent =, for example, OH, (1-4C)alkoxy, amino, cyano, azido; Q = for example, 3-R2-4-T-5-R3phenyl wherein R2 and R3 = H or fluoro; T = for example, 5,6-dihydro-2H-thiopyran-4-yl with 0-2 O atoms bonded to S) are useful as antibacterial agents; and processes for their manuf. and pharmaceutical compns. contg. them are described. Compds. I have a good spectrum of activity in vitro against std. organisms, which are used to screen for activity against pathogenic bacteria. For example, the min. inhibitory concns. of II against methicillin sensitive and quinolone sensitive Staphylococcus aureus and against methicillin resistant and quinolone resistant Staphylococcus aureus are 4 and 8 .mu.g/mL, resp. Compds. I showed a favorable decreased MAO-A potency compared with analogs from the known art with C-5 side chains such as acetamidomethyl or unsubstituted azolylmethyl or hydroxymethyl. They also showed favorable decreased MAO-A potency compared with analogs in which the HET group is unsubstituted. Sixty-one example prepns. of I are included. For example, to prep. II, (5R)-3-[4-(1-oxo-3,6-dihydro-2H-

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thiopyran-4-yl)-3-fluorophenyl]-5-[(4-hydroxymethyl-1,2,3-triazol-1yl)methyl]oxazolidin-2-one (2.7 mmol) (prepn. given) was suspended in CH2Cl2 (10 mL), 1,8-diazabicyclo[5.4.0]undec-7-ene (4.7 mmol) was added and the reaction mixt. was cooled to -5.degree.; diphenylphosphoryl azide (3.25 mmol) was added dropwise and it was stirred for 18 h at room temp.; workup gave 1.02 g of II.

```
ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
     2003:696894 CAPLUS
AN
DN
     139:214458
TI
     Preparation of 3-cyclyl-5-[(nitrogen-containing 5-membered
     ring)methyl]oxazolidinones and their use as antibacterial agents
IN
     Gravestock, Michael Barry; Hales, Neil James; Reck, Folkert; Zhou, Fei;
     Fleming, Paul Robert; Carcanague, Daniel Robert; Girardot, Marc Michel
     Astrazeneca AB, Swed.; Astrazeneca UK Limited
PA
SO
     PCT Int. Appl., 140 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LΑ
FAN CNT 1
     PATENT NO.
                       KIND
                             DATE
                                              APPLICATION NO.
     WO 2003072575
                        A1
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             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR,
                                                                         TT. TZ.
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             RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
             ML, MR, NE, SN, TD, TG
PRAI US 2002-360957P
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20020228

MARPAT 139:214458

AB 3-Cycly1-5-[(nitrogen-contg. 5-membered ring)methyl]oxazolidinones (shown as I; e.g. (5R)-3-[4-(1-oxo-3,6-dihydro-2H-thiopyran-4-yl)-3-fluorophenyl]-5-[4-methyl-1,2,3-triazol-1-ylmethyl]oxazolidin-2-one (shown as II); -N-HET is, for example, 3-R1-1,2,4-triazol-1-yl or 5-R1-2H-tetrazol-2-yl wherein R1 is (1-4C) alkyl; Q = for example, 3-R2-4-T-5-R3 phenyl wherein R2 and R3 = H or fluoro; T = for example, 5,6-dihydro-2H-thiopyran-4-yl with 0-2 0 atoms bonded to S), or a pharmaceutically-acceptable salt, or an in-vivo-hydrolyzable ester thereof, are useful as antibacterial agents; and processes for their manuf. and pharmaceutical compns. contg. them are described. Compds. I have a good spectrum of activity in vitro against std. organisms, which are used to screen for activity against pathogenic bacteria. For example, the min. inhibitory concns. of II against methicillin sensitive and quinolone sensitive Staphylococcus aureus and against methicillin resistant and quinolone resistant Staphylococcus aureus are 2 and 4 .mu.g/mL, resp., compared to 2 and 2 .mu.g/mL for the ref. compd. without the Me substituent. Compds. I showed a favorable

decreased MAO-A potency compared with analogs from the known art with C-5 side chains such as acetamidomethyl or unsubstituted azolylmethyl or hydroxymethyl. They also showed favorable decreased MAO-A potency compared with analogs in which the HET group is unsubstituted. Fifty-seven example prepns. of intermediates and 44 example prepns. of I are included. For example, to prep. II, (SR)-3-[4-(1-oxo-3,6-dihydro-2H-thiopyran-4-yl)-3-fluorophenyl]-5-azidomethyloxazolidin-2-one (1.0 mmol; prepn. described) was mixed with 5,6,7,8-tetrachloro-2,9-dimethyl-1,4-dihydro-1,4-ethenonaphthalene (2.0 mmol) in dry 1,4-dioxane (4 mL) in a sealed microwave reaction tube. The tube was placed in a Smith microwave reactor at 170.degree. for 20 min. The reaction mixt. was then transferred into a round bottom flask and the solvent was removed under vacuum. The residue was purified by chromatog. on silica gel with 5% MeOH in CH2Cl2 to give a mixt. of the 4- and 5-Me regioisomers. This mixt. was further sepd. on a chiral column (chiralcel OD) with iso-PrOH/hexanes (1:1) to give II (74 mg).

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
L10
     2002:927428 CAPLUS
AN
DN
     138:14010
ΤI
     Preparation of aryl-8-azabicyclo[3.2.1] octanes for the treatment of
     depression
IN
     Gilbert, Adam Matthew
PΑ
     Wyeth, John, and Brother Ltd., USA
SO
     PCT Int. Appl., 64 pp.
     CODEN: PIXXD2
DТ
     Patent
LA
     English
FAN.CNT 1
                                              APPLICATION NO.
     PATENT NO.
                        KIND
                              DATE
PΙ
     WO 2002096906
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                                              WO 2002-US16008
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             GM, HR, HU, ID, IL, IN, IS,
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                                            ZW, AM, AZ, BY, KG, KZ, MD, RU,
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
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                                                                              TR.
                                              US 2002-151210
     US 2003032645
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                        A1
                                                                20020520
     US 6632824
                        B2
                              20031014
PRAI US 2001-293563P
                              20010525
     MARPAT 138:14010
os
GΙ
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AB Title compds. I [X = NH, O or S; Y = (CH2)n where n = 0-3; A = (un)-substituted Ph or -pyridyl ring with addnl. possibility of being fused to an addnl. cycloalkyl or heterocyclic group using the ortho and meta positions; Ar = (un)substituted -indolyl, -Ph, -naphthyl, -anthracenyl, -phenanthrenyl, -benzyl, -benzofuryl, or -benzothienyl] are prepd. and disclosed as compds. for the treatment of depression. Thus, II was prepd. by N-alkylation of 3-naphththalen-2-yl-8-azabicyclo[3.2.1]oct-2-ene (prepn. given) with 4-(2-chloroethoxy)-1H-indole (prepn. given). I possessed IC50 values (nM) in the range of 3.5-191.0 in binding assays with cells possessing the human 5-HT transporter. The invention also

includes formulations contg. these compds., and methods for making and using compds. of this invention.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L10 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
AN
     2002:754196 CAPLUS
DN
     137:257677
     Methods of treating or preventing Alzheimer's disease using
TI
     4-aryl-3-aralkoxypiperidines and -azabicyclooctanes
TN
     Nieman, James A.; Fang, Lawrence; Jagodzinska, Barbara
     Elan Pharmaceuticals, Inc., USA; Pharmacia & Upjohn Company
     PCT Int. Appl., 449 pp.
SO
     CODEN: PIXXD2
DТ
     Patent
     English
LΑ
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                              APPLICATION NO. DATE
                                              WO 2002-US9100
                                                                20020321
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     WO 2002076440
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     WO 2002076440
                        A3
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              TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
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              BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRAI US 2001-278371P
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     US 2001-308729P
                              20010730
OS
     MARPAT 137:257677
GI
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$$\begin{array}{c} H \\ N \\ Q \\ XZ_{n}R^{1} \\ R^{3} W_{m}R^{2} \end{array}$$

Disclosed are methods for treating or preventing Alzheimer's disease, and other diseases, and/or inhibiting .beta.-secretase enzyme, and/or inhibiting deposition of A beta peptide in a mammal, using 3,4-disubstituted piperidinyl compds. (I) wherein the variables R1, R2, R3, R4, Q, W, X, Z, m, and n are defined below. Although neither the compds. nor the methods of prepn. are claimed, .apprx.150 example prepns., translations from the German examples of patent WO 9709311, are included. I inhibit .beta.-secretase with IC50 < 50 .mu.M; compds. that are effective inhibitors of .beta.-secretase activity demonstrate reduced cleavage of the substrate as compared to a control. In I, R1 is aryl, heterocycle; R2 is Ph, naphthyl, acenaphthyl, cyclohexyl, pyridyl, pyrimidinyl, pyrazinyl, oxopyridinyl, diazinyl, triazolyl, thienyl, oxazolyl, oxadiazolyl, thiazolyl, pyrrolyl, or furyl, optionally substituted. R3 is: H, hydroxy, lower-alkoxy, or lower-alkenyloxy; R4 is: H, lower-alkyl, lower-alkenyl, lower-alkoxy, hydroxy-lower-alkyl, lower-alkoxy-lower-alkyl, benzyl, oxo, or where R3 and R4 together are a bond, or as specified in the claims. Q is: ethylene, or is absent; X is: a bond, -O-, -S-, -CH-R11- (R11 defined in claims), -CHOR9- (R9 defined in claims), -OCO, -CO-, or C:NOR10- (R10 is carboxyalkyl, alkoxycarbonylalkyl, alkyl or H), with the bond emanating from an O or S atom joining to a satd. C atom of group Z or to R1; W is: -O-, or -S-; Z is: lower-alkylene, lower-alkenylene, hydroxy-lower-alkylidene, -O-, -S-, -O-Alk- (Alk is a lower alkylene), -S-Alk-, -Alk-O-, or -Alk-S. N is: 1, or 0 or 1 when X is -O-CO; and where m is 0 or 1; with provisos.

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L10 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
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AN 1999:811082 CAPLUS

DN 132:49887

TI Preparation of 3-(bicyclic-heteroaryl)-8-azabicyclo[3.2.1]oct-2-enes and -octanes for inhibition of serotonin reuptake

IN Audia, James Edmund; McDaniel, Stacey Leigh; Nissen, Jeffrey Scott

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10/620559
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Eli Lilly and Company, USA
PA
SO
     PCT Int. Appl., 46 pp.
     CODEN: PIXXD2
     Patent
     English
LA
FAN.CNT 1
                                            APPLICATION NO.
                            DATE
                                                             DATE
     PATENT NO.
                      KIND
     WO 9965492
                       A1
                            19991223
                                            WO 1999-US12602 19990604
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             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
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             SD, SG, SI, SK, SL, TJ,
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                                            US 1999-326924
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     US 6107307
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                                            EP 1999-304680
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                                                             19990616
     EP 969005
                       A1
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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                            19980619
PRAI US 1998-89951P
     WO 1999-US12602
                       W
                            19990604
OS
     MARPAT 132:49887
GI
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$$N-Me$$

$$N-R$$

$$I \qquad F$$
II

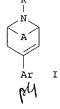
The invention provides 3-(bicyclic-heteroaryl)-8-azabicyclo[3.2.1]oct-2-enes and -octanes I, which are useful for the inhibition of serotonin reuptake in mammals [wherein A-B = C:CH or CHCH2; R = H, or C1-C4 substituent; Het = bicyclic heteroaryl optionally substituted with 1-2 of H, halo, C1-C4 alkyl, C3-C6 cycloalkyl, C1-C4 alkoxy, cyano, nitro, carboxamido, CF3, or OH; and pharmaceutically acceptable salts thereof]. The compds. are selective inhibitors of serotonin reuptake, and as such are useful as antidepressants, etc. Prepns. of several compds. I and intermediates (some prophetic) are given. For instance, condensation of 6-fluoroindole with tropinone in AcOH in the presence of H3PO4, and hydrogenation of the resultant azabicyclooctene deriv., gave azabicyclooctane deriv. II. In a paroxetine binding assay, representative compds. I inhibited serotonin reuptake potently, with activity in some cases in the low nanomolar range (no addnl. data).

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
L10
     1998:708819 CAPLUS
AN
DN
     129:316150
     Preparation of bicyclic amine derivatives as pesticides
TI
     Godfrey, Christopher Richard Ayles; Salmon, Roger; Russell, Charles Adam
IN
PA
     Zeneca Ltd., UK
SO
     PCT Int. Appl., 31 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LΑ
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                            APPLICATION NO.
PΙ
     WO 9846600
                       A1
                            19981022
                                           WO 1998-GB693
                                                             19980304
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             NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
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UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

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RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,
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     AU 9865077
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      EP 971918
                           A1
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      JP 2001521514
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                                 20011106
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      ZA 9802204
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                                                                       19980316
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                                 19970326
PRAI GB 1997-6222
                           Α
      WO 1998-GB693
                           W
                                 19980304
     MARPAT 129:316150
OS
GI
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The title compds. [I; A = WXCCYZ, XC:CY; Ar = (un) substituted Ph, (un) substituted 5- or 6-membered unsatd., (benzo-fused) heterocyclyl with 1-3 N, O, S; R = H, CHO, cyano, (un) substituted C1-15 alkyl, aryl, aralkyl, (hetero)aryl, (aryl)alkenyl, etc., a proviso is given; W, X, Y, Z = H, OH, acyloxy, alkoxy, alkylsilyloxy, cyano, halo], useful as insecticides, acaricides and nematocides, were prepd. by dehydration of the parent aryl heterocyclyl alcs. For example, adding a THF soln. of 8-(2,2,2-trifluoroethyl)-8-azabicyclo[3.2.1]octan-3-one to lithiated 3.5-dibromopyridine in THF at -78.degree. and stirring the mixt. for 2 h at -60.degree. gave exo-3-(5-bromopyrid-3-yl)-endo-3-hydroxy-8-(2,2,2trifluoroethyl)-8-azabicyclo[3.2.1]octane. This was dissolved in CH2Cl2, stirred with Et3N and MeSO2Cl under N for 1 h at 0.degree. and allowed to react at ambient temp. for .apprx.3 days to give a title compd. 3-(5-bromopyrid-3-y1)-8-(2,2,2-trifluoroethy1)-8-azabicyclo[3.2.1]oct-2ene. The latter at 500 ppm gave 80-100% kill in a test against Tetranychus urticae. An emulsifiable conc., wettable powder, dusting. powder, concd. liq., capsule suspension, aq. suspension conc. and H2O-dispersible granule formulation contg. 3-(6-chloropyrid-3-y1)-8-methyl-8-azabicyclo[3.2.1]oct-2-ene were given.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

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ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
L10
     1997:372147 CAPLUS
AN
DN
     126:343505
TI
     Preparation of 8-azabicyclo[3.2.1]oct-2-enes as serotonin reuptake
     inhibitors
IN
     Moldt, Peter; Scheel-Krueger, Joergen; Olsen, Gunnar M.; Nielsen, Elsebet
     Oestergaard
     Neurosearch A/s, Den.; Moldt, Peter; Scheel-Krueger, Joergen; Olsen,
PΑ
     Gunnar M.; Nielsen, Elsebet Oestergaard
SO
     PCT Int. Appl., 29 pp.
     CODEN: PIXXD2
DT
     Patent
T.A
     English
FAN.CNT 1
     PATENT NO.
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                                            APPLICATION NO.
                                                             DATE
                                                             19961011
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     WO 9713770
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                                            WO 1996-EP4449
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CA 2233541
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                                      EP 1996-934662
                                                       19961011
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19981118
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     CN 1199400
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                                              US 1998-43294
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     <u>US</u> 6100275
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PRAÍ-DK 1995-1156
                        Α
                              19951013
     WO 1996-EP4449
                        W
                              19961011
os
     MARPAT 126:343505
GI
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AB Title compds. [I; R = H, (cyclo)alkyl, CH2CH2OH, etc.; R1 = (un) substituted Ph, -naphthyl, -heteroaryl, etc.] were prepd. Thus, 8-methyl-8-azabicyclo[3.2.1] octan-3-one was condensed with 3,4-Cl2C6H3Br and the product dehydrated to give I (R = Me, R1 = C6H3C12-3.4). Data for biol. activity of 1 prepd. I were given.

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ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
L10
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1997:307688 CAPLUS AN

DN126:277402

New 4-aryl-3-aralkoxypiperidines and -azabicylooctanes for treating heart TI and kidney insufficiency

Binggeli, Alfred; Breu, Volker; Bur, Daniel; Fischli, Walter; Gueller, IN Rolf; Hirth, Georges; Maerki, Hans-Peter; Mueller, Marcel; Oefner, Christian; Stadler, Heinz; Vieira, Eric; Wilhelm, Maurice; Wostl, Wolfgang

F. Hoffmann-La Roche Ag, Switz. PA

PCT Int. Appl., 492 pp. so

CODEN: PIXXD2

DT Patent

LΑ German

FAN (	CNT 1			
111111	PATENT NO.	KIND DATE	APPLICATION NO.	DATE
PI	WO 9709311	A1 19970313	WO 1996-EP3803 IL, JP, KR, MX, NO, NZ	
	RW: AT, BE, C	H, DE, DK, ES,	FI, FR, GB, GR, IE, IT,	LU, MC, NL, PT, SE
	CA 2230931	AA 19970313	CA 1996-2230931	19960829
	AU 9667432	A1 19970327	AU 1996-67432	19960829
	AU 708616			
			EP 1996-927715	19960829
	EP 863875			
	•	H, DE, DK, ES,	FR, GB, GR, IT, LI, LU,	, NL, SE, MC, PT,
	IE, FI			
			CN 1996-197674	
	JP 11500447	T2 19990112	JP 1996-510837	19960829
			BR 1996-10385	
			NZ 1996-315677	
	RU 2167865			19960829
	AT 242213	E 20030615		19960829
	CZ 292327		CZ 1998-684	
				19960902
	TW 474932 NO 9800954		TW 1996-85110684 NO 1998-954	
			US 1999-255185	
			US 1999-255165 US 1999-456283	
ד ג סמ	CH 1995-2548		03 1999-430203	19991207
PKAI	CH 1995-2546 CH 1996-1876			
		W 19960829		
		A3 19960906		
	US 1999-255185			
os	MARPAT 126:277402			
0.5	1211(1711 120.27/402			

GI

AB New piperidine and azabicyclooctane derivs. (> 1000 compds.) are renin inhibitors for treatment of high blood pressure, heart and kidney insufficiency. Thus, the piperidine deriv. I was prepd. from 1-benzyl-3-propyl-4-piperidinone by reaction with 4-FC6H4Br, followed by 1-benzyloxy-3-chloromethylnaphthalene and deblocking. I had a renin-inhibiting IC50 of 0.317 .mu.M.

I